

Appl. No. 10/010,279
Amtd. Dated May 6, 2005
Reply to Office action of February 11, 2005
Attorney Docket No. P15252-US1
EUS/JP/05-6087

Amendments to the Claims:

This listing of Claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of providing authentication for a network-based transaction, the method comprising:

presenting a first information set to a user through an Internet access device, the first information set being associated with the transaction and communicated to said Internet access device over a first communication network;

creating a coupling between the first information set and a second information set, wherein the second information set is also associated with the transaction;

presenting the second information set to the user and requesting authorization of the transaction at a mobile terminal using a public land mobile network (PLMN) radio resources; and

receiving authorization information for the transaction from the mobile terminal using over the PLMN radio resources wherein in response to said authorization, providing said transaction to said user using said Internet access device over said first communication network.

2. (Original) The method of claim 1 wherein creating the coupling further comprises sending a wireless application protocol (WAP) push message to the mobile terminal.

3. (Original) The method of claim 1 wherein the authorization information comprises client-side public key infrastructure (PKI) information.

4. (Original) The method of claim 2 wherein the authorization information comprises client-side public key infrastructure (PKI) information.

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5. (Original) The method of claim 1 wherein the authorization information comprises a password.

6. (Original) The method of claim 5 wherein the authorization information further comprises a caller line identification (caller ID) for the mobile terminal.

7. (Currently Amended) A method of authorizing a transaction in which transaction information is presented to a user at an Internet access device in a first information set in a first format suitable for presentation on the Internet access device wherein said first information set is communicated over to said Internet access device over a first communication network, the method comprising:

creating a second information set in a second format suitable for presentation at a mobile terminal, wherein the second information set is representative of the first information set;

linking the first information set and the second information set ;

sending the second information set to said mobile terminal using a public land mobile network (PLMN) for presentation to the user at the mobile terminal ; and

receiving authentication information from the mobile terminal through the PLMN; and

providing said transaction to said user at said Internet access device over said first communication network in response to said step of receiving said authentication information.

8. (Original) The method of claim 7 wherein linking the first information set and the second information set further comprises sending a wireless application protocol (WAP) push message to the mobile terminal.

9. (Original) The method of claim 8 wherein the WAP push message comprises a hyperlink to the second information set.

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10. (Original) The method of claim 9 wherein the first information set is formatted in hypertext markup language (HTML) and the second information set is formatted in wireless markup language (WML).

11. (Original) The method of claim 10 wherein the second information set is further formatted to be signed by a user using a WAP signText script.

12. (Original) The method of claim 7 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

13. (Original) The method of claim 8 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

14. (Original) The method of claim 9 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

15. (Original) The method of claim 10 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

16. (Currently Amended) Apparatus for providing authentication for a network-based transaction, the apparatus comprising:

means for presenting a first information set to a user through an Internet access device, the first information set being associated with the transaction and communicated over to said Internet access device over a first communication network;

means for creating a coupling between the first information set and a second information set, wherein the second information set is also associated with the transaction;

means for presenting the second information set to the user and requesting authorization of the transaction at a mobile terminal using a public land mobile network (PLMN) radio resources; and

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means for receiving authorization information for the transaction from the mobile terminal using over the PLMN radio resources wherein in response to said authorization, providing said transaction to said user using said Internet access device over said first communication network.

17. (Currently Amended) Apparatus for authorizing a transaction in which transaction information is presented to a user at an Internet access device in a first information set in a first format suitable for presentation on the Internet access device wherein said first information set is communicated over to said Internet access device over a first communication network, the apparatus comprising:

means for creating a second information set in a second format suitable for presentation at a mobile terminal, wherein the second information set is representative of the first information set;

means for linking the first information set and the second information set;

means for sending the second information set to said mobile terminal over a public land mobile network (PLMN) for presentation to the user at the mobile terminal ; and

means for receiving authentication information from the mobile terminal through the PLMN; and

means for providing said transaction to said user at said Internet access device over said first communication network in response to said step of receiving said authentication information.

18. (Currently Amended) A computer program product comprising a computer for authorizing a transaction in which transaction information is presented to a user at an Internet access device in a first information set in a first format suitable for presentation on the Internet access device wherein said first information set is communicated over to said Internet access device over a first communication network, the computer program further comprising:

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instructions for creating a second information set in a second format suitable for presentation at a mobile terminal, wherein the second information set is representative of the first information set;

instructions for linking the first information set and the second information set;

instructions for sending the second information set to said mobile terminal over a public land mobile network (PLMN) for presentation to the user at the mobile terminal; and

instructions for receiving authentication information from the mobile terminal through the PLMN; and

instructions for providing said transaction to said user at said Internet access device over said first communication network in response to said step of receiving said authentication information.

19. (Original) The computer program product of claim 18 wherein the instructions for linking the first information set and the second information set further comprise instructions for sending a wireless application protocol (WAP) push message to the mobile terminal.

20. (Original) The computer program product of claim 19 wherein the WAP push message comprises a hyperlink to the second information set.

21. (Original) The computer program product of claim 20 wherein the first information set is formatted in hypertext markup language (HTML) and the second information is formatted in wireless markup language (WML).

22. (Original) The computer program product of claim 21 wherein the second information set is further formatted to be signed by a user using a WAP signText script.

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23. (Original) The computer program product of claim 18 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

24. (Original) The computer program product of claim 19 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

25. (Original) The computer program product of claim 20 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

26. (Original) The computer program product of claim 21 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

27. (Currently Amended) A network that enables authentication of a transaction comprising:

a server system operable to create a first information set formatted for an Internet access device and a second information set formatted for a mobile terminal, the second information set representative of the first information set which is in turn representative of the transaction, the server system further operable to create a coupling between the first information set and the second information set wherein said first information set is communicated to said Internet access device over a wireline communication network;

an Internet connection at the server system; and

a public land mobile network (PLMN) ~~infrastructure~~-operatively connected to the server system ~~so as to be operable to present~~ communicate the second information set ~~at the to said~~ mobile terminal and obtain authorization information from the mobile terminal so that the transaction can be authenticated by the server system wherein in response to obtaining such authorization information, said server providing said

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transaction to said user at said Internet access device over said wireline communication network.

28. (Original) The network of claim 27 wherein creating the coupling between the first information set and the second information set is accomplished at least in part by sending a wireless application protocol (WAP) push message to the mobile terminal.

29. (Original) The network of claim 28 wherein the WAP push message comprises a hyperlink to the second information set.

30. (Original) The network of claim 27 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

31. (Original) The network of claim 28 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

32. (Original) The network of claim 29 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

33. (Currently Amended) A system for authorizing a transaction in which transaction information is presented to a user at an Internet access device in a first information set in a first format suitable for presentation on the Internet access device, the system comprising:

a hypertext markup language (HTML) server operable to provide content for the first information set and to create a coupling between the first information set and a second information set wherein said first information set is communicated over to said Internet access device over a wireline communication network;

a wireless markup language (WML) server operable to create the second information set in a format suitable for presentation on a wireless terminal, wherein the

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second information set is representative of the first information set, the WLM server operatively connected to the HTML server; and

a network connection for the system operable to enable the WLM server to send the second information set over a public land mobile network (PLMN) for presentation to the user at the mobile terminal and receive authentication information from the mobile terminal and wherein in response to receiving said authentication information, providing said transaction to said user at said Internet access device over said wireline communication network.

34. (Original) The system of claim 33 wherein the WML server and the HTML server operate on a single computing platform.

35. (Original) The system of claim 33 wherein the network connection is an Internet connection.

36. (Original) The system of claim 33 wherein the coupling is created at least in part by sending a wireless application protocol (WAP) push message to the mobile terminal.

37. (Original) The system of claim 34 wherein the coupling is created at least in part by sending a wireless application protocol (WAP) push message to the mobile terminal.

38. (Original) The system of claim 35 wherein the coupling is created at least in part by sending a wireless application protocol (WAP) push message to the mobile terminal.

39. (Original) The system of claim 33 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

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40. (Original) The system of claim 34 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

41. (Original) The system of claim 35 wherein the authentication information comprises client-side public key infrastructure (PKI) information.

42. (Original) The system of claim 36 wherein the authentication information comprises client-side public key infrastructure (PKI) information.